IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): An image coding apparatus comprising:

a wavelet transform means for dividing an input image into subbands by wavelet transform;

a code block generating means for dividing each of the subbands generated by the wavelet transform means into code blocks each of a predetermined size;

a bit plane generating means for generating a bit plane including from a most significant bit to least significant bit in units of the code block;

a coding pass processing means for processing each of sample points in the bit plane by any of a plurality of coding passes; and

an arithmetic coding means for making arithmetic coding according to results of the coding pass processing;

the coding pass processing means reading, from a storage means, significance ~~ant~~/non-significance information indicating whether sample points in an area including the position of a sample point being currently processed and which is occupied by a predetermined number of samples, and those existing around the area, are significant or non-significant, and making a parallel comparison between the significance/non-significance information and a plurality of preset matching patterns, thereby detecting a next sample point to be processed.

Claim 2 (Original): The apparatus as set forth in claim 1, wherein: the matching patterns indicate significant or non-significant patterns at the plurality of sample points, respectively, when a jump can be made from the position of an arbitrary sample point to the position of a next sample point to be processed; and the coding pass processing means detects

a sample point to which a jump can be made from the position of a sample point being currently processed by making a parallel comparison between the significance/non-significance information in an area including the position of a sample point being currently processed and which is occupied by a predetermined number of samples and those existing around the area and the plurality of matching patterns.

Claim 3 (Original): The apparatus as set forth in claim 1, wherein: the matching patterns have jump address values set therein, respectively; and the coding pass processing means detects a next to-be-processed sample point according to the jump address value set in any one of the matching patterns compared with the significance/non-significance information and that is found to coincide with the latter.

Claim 4 (Original): The apparatus as set fourth in claim 3, wherein when there is found no coincidence between the significance/non-significance information and the plurality of matching patterns as the result of the comparison them, the coding pass processing means sets a new area having the predetermined number of samples, reads, from the storage means, new significance/non-significance information indicating whether the sample points in the new area and those around the area, and makes a parallel comparison between the new significance/non-significance information and the preset plurality of matching patterns.

Claim 5 (Original) The apparatus as set fourth in claim 1, wherein the significance/non-significance information is pre-initialized to "non-significant" for each code block.

Claim 6 (Currently Amended): An image coding apparatus including comprising:

a wavelet transform means for dividing an input image into subbands by wavelet transform;

a code block generating means for dividing each of the subbands generated by the wavelet transform means into code blocks each of a predetermined size;

a bit plane generating means for generating a bit plane including from a most significant bit to least significant bit in units of the code block;

a coding pass processing means for processing each of sample points in the bit plane by any of a plurality of coding passes;

and an arithmetic coding means for making arithmetic coding according to results of the coding pass processing;

the coding pass processing means reading, from a storage means, significance ant/non-significance information indicating whether sample points in the bit plane and those around them are significant or non-significant, and making a parallel comparison between the significance/non-significance information and a plurality of preset matching patterns, thereby detecting, as a next sample point to be processed, a one, nearest to the position of a sample point being currently processed, of the sample points having been determined, as the result of the comparison, to fit any of the plurality of matching patterns.

Claim 7 (Original): The apparatus as set fourth in claim 6, wherein when there is found no sample point showing a coincidence between significance/non-significance information and the plurality of matching patterns, the coding pass processing means sets a new area having the predetermined number of samples, reads, from the storage means, new significance/non-significance information indicating whether the sample points in the new area and those around the area, and makes a parallel comparison between the new

significance/non-significance information and the preset plurality of matching patterns.

Claim 8 (Original): The apparatus as set fourth in claim 6, wherein the

significance/non-significance information is pre-initialized to "non-significant" for each code

block.

Claim 9 (Currently Amended): An image coding method comprising ~~the steps of~~:

dividing an input image into subbands by wavelet transform;

dividing each of the subbands generated in the wavelet transform step into code

blocks each of a predetermined size;

generating a bit plane including from a most significant bit to least significant bit in

units of the code block;

processing each of sample points in the bit plane by any of a plurality of coding

passes; and

making arithmetic coding according to results of the coding pass processing; in the

coding pass processing, there being read, from a storage means, significance ~~ant~~/non-

significance information indicating whether sample points in an area including the position of

a sample point being currently processed and which is occupied by a predetermined number

of samples, and those existing around the area, are significant or non-significant, and a

parallel comparison being made between the significance/non-significance information and a

plurality of preset matching patterns, thereby detecting a next sample point to be processed.

Claim 10 (Currently Amended): An image coding method comprising ~~the steps of~~:

dividing an input image into subbands by wavelet transform;

dividing each of the subbands generated in the wavelet transform step into code blocks each of a predetermined size;

generating a bit plane including from a most significant bit to least significant bit in units of the code block;

processing each of sample points in the bit plane by any of a plurality of coding passes; and

making arithmetic coding according to results of the coding pass processing; in the coding pass processing means, there being read, from a storage means, significance ant/non-significance information indicating whether sample points in the bit plane and those around them are significant or non-significant, and a parallel comparison being made between the significance/non-significance information and a plurality of preset matching patterns, thereby detecting, as a next sample point to be processed, a one, nearest to the position of a sample point being currently processed, of the sample points having been determined, as the result of the comparison, to fit any of the plurality of matching patterns.

Claims 11-12 (Canceled).

Claim 13 (Currently Amended): A computer-readable recording medium having recorded therein a program including the steps of including computer program instructions, which cause a computer to implement a method of image coding, comprising:

dividing an input image into subbands by wavelet transform;

dividing each of the subbands generated in the wavelet transform step into code blocks each of a predetermined size;

generating a bit plane including from a most significant bit to least significant bit in units of the code block;

processing each of sample points in the bit plane by any of a plurality of coding passes; and

making arithmetic coding according to results of the coding pass processing; in the coding pass processing, there being read, from a storage means, significance ~~ant/~~non-significance information indicating whether sample points in an area including the position of a sample point being currently processed and which is occupied by a predetermined number of samples, and those existing around the area, are significant or non-significant, and a parallel comparison being made between the significance/non-significance information and a plurality of preset matching patterns, thereby detecting a next sample point to be processed.

Claim 14 (Currently Amended): A computer-readable recording medium ~~having recorded therein a program including the steps of~~ including computer program instructions, which cause a computer to implement a method of image coding, comprising:

dividing an input image into subbands by wavelet transform;

dividing each of the subbands generated in the wavelet transform step into code blocks each of a predetermined size;

generating a bit plane including from a most significant bit to least significant bit in units of the code block;

processing each of sample points in the bit plane by any of a plurality of coding passes; and

making arithmetic coding according to results of the coding pass processing; in the coding pass processing means, there being read, from a storage means, significance ~~ant/~~non-significance information indicating whether sample points in the bit plane and those around them are significant or non-significant, and a parallel comparison being made between the significance/non-significance information and a plurality of preset matching patterns, thereby

detecting, as a next sample point to be processed, a one, nearest to the position of a sample point being currently processed, of the sample points having been determined, as the result of the comparison, to fit any of the plurality of matching patterns.

Claim 15 (New): An image coding apparatus comprising:

a wavelet transform unit configured to divide an input image into subbands by a wavelet transforming unit;

a code block generating unit configured to divide each of the subbands generated by the wavelet transforming unit into code blocks each of a predetermined size;

a bit plane generating unit configured to generate a bit plane including from a most significant bit to least significant bit in units of the code block;

a coding pass processing unit configured to process each of sample points in the bit plane by any of a plurality of coding pass units; and

an arithmetic coding unit configured to make arithmetic coding according to results of the coding pass processing;

the coding pass processing unit reading, from a storage unit, significance/non-significance information indicating whether sample points in an area including the position of a sample point being currently processed and which is occupied by a predetermined number of samples, and those existing around the area, are significant or non-significant, and configured to make a parallel comparison between the significance/non-significance information and a plurality of preset matching patterns, thereby detecting a next sample point to be processed.

Claim 16 (New): An image coding apparatus including comprising:

a wavelet transform unit configured to divide an input image into subbands by a wavelet transforming unit;

a code block generating unit configured to divide each of the subbands generated by the wavelet transforming unit into code blocks each of a predetermined size;

a bit plane generating unit configured to generate a bit plane including from a most significant bit to least significant bit in units of the code block;

a coding pass processing unit configured to process each of sample points in the bit plane by any of a plurality of coding pass units;

and an arithmetic coding unit configured to make arithmetic coding according to results of the coding pass processing;

the coding pass processing unit reading, from a storage unit, significance/non-significance information indicating whether sample points in the bit plane and those around them are significant or non-significant, and making a parallel comparison between the significance/non-significance information and a plurality of preset matching patterns, thereby detecting, as a next sample point to be processed, a one, nearest to the position of a sample point being currently processed, of the sample points having been determined, as the result of the comparison, to fit any of the plurality of matching patterns.